



## RAPID RISK ASSESSMENT

# Multinational outbreak of *Salmonella* Enteritidis infections among junior ice hockey players attending the Riga Cup 2015

28 April 2015

### Main conclusions

A multinational outbreak of *Salmonella* Enteritidis is currently ongoing among junior ice hockey players who attended the Riga Cup 2015 in Latvia. The outbreak is reported to have affected more than one hundred participants to date.

This is most likely a point source outbreak, potentially in a cafeteria at the venue, although the possibility of there being additional places of exposure cannot be excluded at this stage. The outbreak is still ongoing and additional cases might be identified among the Finnish and Norwegian teams that have been primarily affected to date, but also among other teams.

Investigations are being undertaken by the Finnish public health authorities to provide further information about the likely time and place of exposure of the cases. ECDC is currently investigating possibilities to conduct a European wide retrospective cohort study.

ECDC encourages affected countries and all others with known or potentially associated cases to report detection of all such cases in the Epidemic intelligence Information System for Food and Waterborne Diseases (EPIS-FWD), and to communicate about adopted control measures through the Early Warning and Response System (EWRS).

### Source and date of request

ECDC internal decision, 20 April 2014.

### Public health issue

Multinational outbreak of *Salmonella* Enteritidis infections among junior ice hockey players attending the Riga Cup 2015.

### Consulted experts

**External experts:** Finland: Sari Huusko and Katrine Pesola (National Institute for Health and Welfare); Norway: Line Vold and Emily MacDonald (Public Health Institute); Latvia: Jurijs Perevoščikovs (Centre for Disease Prevention and Control).

**ECDC experts:** Céline Gossner and Denis Coulombier.

**EFSA experts:** Giusi Amore.

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Suggested citation: European Centre for Disease Prevention and Control. Multinational outbreak of *Salmonella* Enteritidis infections among junior ice hockey players attending the Riga Cup 2015 - 27 April 2015, Stockholm, 2015.

## Disease background information

Enteric infections due to *Salmonella* bacteria are generally referred to by the term 'salmonellosis' when they are due to *Salmonella* species other than *Salmonella* Typhi and *Salmonella* Paratyphi.

Various animals (especially poultry, pigs, cattle, and reptiles) can be reservoirs for *Salmonella*, and humans generally become infected by eating poorly cooked, contaminated food. According to food-borne outbreak data reported in the European Union, eggs and egg products are the foods most commonly implicated in *Salmonella* outbreaks. Meat, especially pork and, to a lesser extent, poultry meat, is also commonly involved [1].

The incubation period and the symptoms depend on the amount of bacteria present in the food, the immune status of the person and the serotype of *Salmonella*, but onset of symptoms is normally within 12 to 36 hours after consumption of the contaminated food. The clinical picture is characterised by fever, diarrhoea, abdominal pain, nausea and vomiting. Symptoms usually last for a few days. Dehydration sometimes requires hospital admission. In the elderly or otherwise immunocompromised patients, it can be fatal. Elderly patients are also more prone to developing severe blood infection. In addition, post-infectious complications, such as reactive joint inflammation occur in about 10% of the cases [2].

## Event background information

From 27 March to 26 April, 197 junior ice hockey teams from more than 13 countries participated in the Riga Cup 2015, which took place in Riga, Latvia. The games were played in several arenas. Several thousand participants from Belarus, Estonia, Finland, Germany, Hungary, Latvia, Lithuania, Luxemburg, Norway, Russian Federation, Sweden, Switzerland and Ukraine attended the event (a list of participating countries and number of participants is being compiled).

On 16 April, Finland reported an outbreak of salmonellosis among junior ice-hockey players through EWRS and EPIS-FWD. Six members of a Finnish junior ice hockey team tested positive for *Salmonella* group D among the 19 individuals with symptoms of gastro-enteritis.

As of 24 April, Finland had 35 laboratory confirmed cases from 15 municipalities, with onset of symptoms between 27 March and 16 April. Serotype *S. Enteritidis* Phage type 1 was identified and Multiple-Locus Variable number tandem repeat Analysis (MLVA) typing is ongoing. Five boys have been hospitalised due to their illness. Finland launched a web-based questionnaire shared with all identified Finnish teams (50 teams) to identify participants who experienced diarrhoea more than three times a day. As of 24 April, 170 questionnaires have been completed and 46 participants have reported diarrhoea. The most recent date of onset reported was 23 April. The Finnish cases stayed at five different hotels in Latvia but all ate in the cafeteria at the venue.

According to the Latvian public health authorities, the organisers of the tournament have identified 104 persons with gastrointestinal symptoms (no case definition applied): 82 cases from Finland and 22 cases from Norway, during the weekend of 3 to 6 April. The organiser reported that the affected teams ate in the cafeteria at the venue on 3 and/or 4 April.

On 16 April, the Latvian Public Health authority interviewed the staff at the cafeteria where the tournament is taking place and took smear and faecal samples that yielded negative results. The Latvian food and veterinary services conducted a routine investigation, but the report is not yet available.

## ECDC threat assessment for the EU

Considering that all reported cases have been participating in the junior ice hockey Cup in Riga, that the cases are clustered in time (Riga Cup period), and that all Finnish cases have eaten in the cafeteria at the venue, this outbreak is most likely a point source outbreak, potentially at the cafeteria, although the possibility of there being additional places of exposure cannot be excluded at this stage. The most recent date of onset is 23 April which indicates that the outbreak is still ongoing. As the tournament has just finished and the source(s) of infection has/have not yet been identified, new cases are likely to be detected.

In order to report cases to ECDC, the following case definition is suggested:

**A confirmed case**

A person with:

Laboratory confirmed infection with *Salmonella* Enteritidis

AND

Participation to the RIGA Cup 2015 between 27 March and 26 April 2015

AND

Onset of symptoms on or after 27 March and no later than a week after leaving the event venue

**A suspected case**

A person with:

Gastro-intestinal symptoms such as diarrhoea and vomiting

AND

Participation to the RIGA Cup 2015 between 27 March and 26 April 2015

AND

Onset of symptoms on or after 27 March and no later than a week after leaving the event venue

## Conclusions

This is most likely a point source outbreak, potentially in a cafeteria at the venue. The outbreak is still ongoing and additional cases might be identified among the already affected Finnish and Norwegian teams, but also among other teams.

Investigations are being undertaken by the Finnish public health authorities to provide further information about the likely time and place of exposure of the Finnish cases. ECDC is currently investigating possibilities to conduct a European wide retrospective cohort study.

ECDC encourages affected countries and all others with known or potentially associated cases to report detection of all such cases through EPIS-FWD and to communicate about adopted control measures through EWRS.

## References

- 1 European Food Safety Authority and European Centre for Disease Prevention and Control. The European Union Summary Report on Trends and Sources of Zoonoses, Zoonotic Agents and Food-borne Outbreaks in 2013. *EFSA Journal* 2015;13(1):3991, 162 pp.
- 2 European Centre for Disease Prevention and Control (ECDC), Health topics: Salmonellosis. Available from: <http://ecdc.europa.eu/en/healthtopics/salmonellosis/Pages/index.aspx>